AMENDMENTS TO THE CLAIMS

1-6. (Cancelled)

7. (Currently Amended) A non-aqueous electrolyte battery comprising:

a positive electrode,

a negative electrode,

a separator disposed between the positive and negative electrodes, and

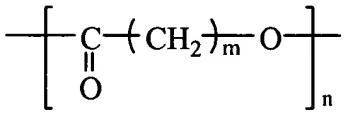
an electrolyte solution;

wherein, of the positive electrode and the negative electrode, either the positive electrode comprises a positive electrode current collector coated with a positive electrode binder composition composed primarily of ~~the~~ a thermoplastic resin ~~of claim 1~~ and a positive electrode active material, or the negative electrode comprises a negative electrode current collector coated with a negative electrode binder composition composed primarily of ~~the~~ a thermoplastic resin ~~of claim 1~~ and a negative electrode active material,

wherein the thermoplastic resins have a swelling ratio as determined from the equation

$$\text{swelling ratio (\%)} = \frac{\text{weight in grams of swollen thermoplastic resin after 24 hours immersion in electrolyte solution at 20°C (g)}}{\text{weight in grams of thermoplastic resin before immersion in electrolyte solution at 20°C (g)}} \times 100 ,$$

within a range of 150 to 800%, and contain units of general formula (1) below



(1)

wherein the letter m is a number from 3 to 5, and the letter n is 5 or more.

8. (Currently Amended) A non-aqueous electrolyte battery comprising:

a positive electrode,

a negative electrode,

a separator disposed between the positive and negative electrodes, and

an electrolyte solution;

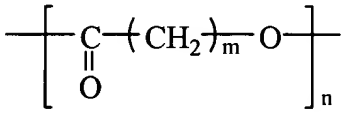
wherein the positive electrode comprises a positive electrode current collector coated with a positive electrode binder

composition composed primarily of ~~the~~ a thermoplastic resin ~~of claim 1~~ and a positive electrode active material, and the negative electrode comprises a negative electrode current collector coated with a negative electrode binder composition composed primarily of ~~the~~ a thermoplastic resin ~~of claim 1~~ and a negative electrode active material,

wherein the thermoplastic resins have a swelling ratio as determined from the equation

$$\text{swelling ratio (\%)} = \frac{\text{weight in grams of swollen thermoplastic resin after 24 hours immersion in electrolyte solution at 20°C (g)}}{\text{weight in grams of thermoplastic resin before immersion in electrolyte solution at 20°C (g)}} \times 100 ,$$

within a range of 150 to 800%, and contain units of general formula (1) below



(1)

wherein the letter m is a number from 3 to 5, and the letter n is 5 or more.

9. (Currently Amended) A non-aqueous electrolyte battery comprising:

a positive electrode and a negative electrode, each comprised of a current collector coated with a binder composition composed primarily of a thermoplastic resin and an active material,

a separator disposed between the positive and negative electrodes, and

an electrolyte solution;

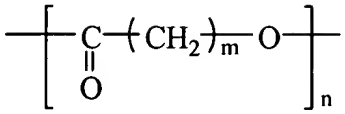
wherein 1 to 20 % by weight of the thermoplastic resin in the binder composition is a thermoplastic resin ~~according to claim 1~~ which has a glass transition temperature lower than the freezing point of the electrolyte solution,

wherein the thermoplastic resins have a swelling ratio as determined from the equation

$$\text{swelling ratio (\%)} = \frac{\text{weight in grams of swollen thermoplastic resin after 24 hours immersion in electrolyte solution at 20°C (g)}}{\text{weight in grams of thermoplastic resin before immersion in electrolyte solution at 20°C (g)}} \times 100 \ ,$$

within a range of 150 to 800%, and contain units of general formula

(1) below



(1)

wherein the letter m is a number from 3 to 5, and the letter n is 5 or more.

10. (Original) The non-aqueous electrolyte battery of claim 9, wherein the thermoplastic resin having a glass transition temperature lower than the freezing point of the electrolyte solution is a thermoplastic polyurethane resin prepared by reacting a polyol compound with a polyisocyanate compound and a chain extender.

11. (Currently Amended) The non-aqueous electrolyte battery of any one of claims 7 to 10, 18 and 19 wherein the separator is composed of a separator base impregnated with an electrolyte solution.

12. (Currently Amended) The non-aqueous electrolyte battery of any one of claims 7 to 10, wherein the separator is composed of ~~the~~ a gel electrolyte ~~of claim 5 or 6~~

prepared by shaping a thermoplastic resin having a swelling ratio as determined from the equation

$$\text{swelling ratio (\%)} = \frac{\text{weight in grams of swollen thermoplastic resin after 24 hours immersion in electrolyte solution at 20°C (g)}}{\text{weight in grams of thermoplastic resin before immersion in electrolyte solution at 20°C (g)}} \times 100 ,$$

within a range of 150 to 800%, then immersing the shaped resin in an electrolyte solution to effect swelling.

13. (Withdrawn) An electrical double-layer capacitor comprising:

a pair of polarizable electrodes,

a separator disposed between the polarizable electrodes, and,

an electrolyte solution;

wherein one or both of the pair of polarizable electrodes is comprised of a current collector coated with a polarizable electrode binder composition composed primarily of the thermoplastic resin of claim 1 and activated carbon.

14. (Withdrawn) An electrical double-layer capacitor comprising:

a pair of polarizable electrodes, each comprised of a current collector coated with a polarizable electrode binder composition composed primarily of a thermoplastic resin and activated carbon,

a separator disposed between the polarizable electrodes, and

an electrolyte solution;

wherein 1 to 20 % by weight of the thermoplastic resin in the binder composition is a thermoplastic resin according to claim 1 which has a glass transition temperature lower than the freezing point of the electrolyte solution.

15. (Withdrawn) The electrical double-layer capacitor of claim 14, wherein the thermoplastic resin having a glass transition temperature lower than the freezing point of the electrolyte solution is a thermoplastic polyurethane resin prepared by reacting a polyol compound with a polyisocyanate compound and a chain extender.

16. (Withdrawn) The electrical double-layer capacitor of any one of claims 13 to 15, wherein the separator is composed of a separator base impregnated with an electrolyte solution.

17. (Withdrawn) The electrical double-layer capacitor of any one of claims 13 to 15, wherein the separator is composed of the gel electrolyte of claim 5 or 6.

18. (New) A non-aqueous electrolyte battery comprising:

a positive electrode and a negative electrode, each comprised of a current collector coated with a binder composition composed primarily of a thermoplastic resin and an active material,

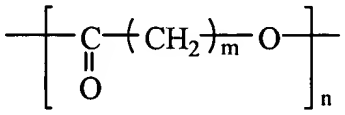
a separator disposed between the positive and negative electrodes, and

an electrolyte solution;

wherein 1 to 20 % by weight of the thermoplastic resin in the binder composition for the positive electrode is a thermoplastic resin which has a swelling ratio as determined from the equation

$$\text{swelling ratio (\%)} = \frac{\text{weight in grams of swollen thermoplastic resin after 24 hours immersion in electrolyte solution at 20°C (g)}}{\text{weight in grams of thermoplastic resin before immersion in electrolyte solution at 20°C (g)}} \times 100,$$

within a range of 150 to 800%, and contains units of general formula (1) below



(1)

wherein the letter m is a number from 3 to 5, and the letter n is 5 or more.

19. (New) A non-aqueous electrolyte battery comprising:

a positive electrode and a negative electrode, each comprised of a current collector coated with a binder composition composed primarily of a thermoplastic resin and an active material,

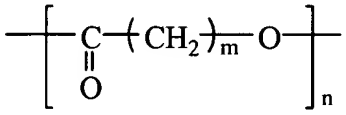
a separator disposed between the positive and negative electrodes, and

an electrolyte solution;

wherein 1 to 20 % by weight of the thermoplastic resin in the binder composition is a thermoplastic resin which has a swelling ratio as determined from the equation

$$\text{swelling ratio (\%)} = \frac{\text{weight in grams of swollen thermoplastic resin after 24 hours immersion in electrolyte solution at 20°C (g)}}{\text{weight in grams of thermoplastic resin before immersion in electrolyte solution at 20°C (g)}} \times 100,$$

within a range of 150 to 800%, and contains units of general formula (1) below



(1)

wherein the letter m is a number from 3 to 5, and the letter n is 5 or more.

20. (New) The non-aqueous electrolyte battery according to claims 7, 8, 18 and 19, wherein the thermoplastic resin having said swelling ratio is a thermoplastic polyurethane resin

prepared by reacting a polyol compound with a polyisocyanate compound and a chain extender.

21. (New) The non-aqueous electrolyte battery according to claim 18 or 19, wherein a residue of the thermoplastic resin in the binder composition is at least one other thermoplastic resin selected from the class consisting of a fluoropolymer, a synthetic rubber, a polyolefin, and a polyether.

22. (New) The non-aqueous electrolyte battery according to claim 21, wherein the fluoropolymer is a polyvinylidene fluoride and/or a polytetrafluoroethylene.